

REMARKS

The Office Action dated December 13, 2005, has been carefully reviewed and the present amendment is submitted in response thereto. Claims 1 and 3 have been amended, claims 16-24 canceled and claim 25 added. Claims 1-16 and 25 remain in the application for prosecution on the merits. Favorable reconsideration of this application as amended is requested.

Claim Rejections Under 35 U.S.C. § 112:

Claim 3 stands rejected under 35 U.S.C. §112, second paragraph as being indefinite. Specifically, the examiner cited "the inner chamber" as having no antecedent basis. Claim 3 has been amended to correct this typographical error by amending the claim language to read "the inner compartment." Claim 3 is now believed to be acceptable.

Claim Rejections Under 35 U.S.C. § 102:

Claims 1-4, 7-8, and 17 stand rejected under 35 U.S.C. §102(b) as being anticipated by Heritier-Best (US 4,843,362). The rejection is respectfully traversed.

Independent claim 1 has been amended to include the limitation of original claim 16. The examiner did not indicate that claim 16 was anticipated by Heritier-Best, but rather rejected claim 16 as obvious over this reference. Thus, amended claim 1 will be discussed below relative to the §103(a) rejection. Claim 17 has been canceled and so the rejection relative to this claim is now moot.

Claims 2-4 and 7-8 all ultimately depend from claim 1 and so are not anticipated by or obvious in view of Heritier-Best for at least the reasons discussed relative to claim 1.

Claim Rejections Under 35 U.S.C. § 103:

Claims 5-6, 9, 11, and 13-16 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Heritier-Best. The rejections are respectfully traversed.

5 of 8
10/807,663

Independent claim 1 has been amended to include the limitation of original claim 16 and now recites in part, "the housing further having an inner wall extending along the inner periphery of the outer core and positioned between the outer core and the coil assembly, and the inner wall being integrally formed with the housing and constructed of a plastic material." The inner wall (28) being integrally formed with the housing (22) can be best seen in Fig. 3 of the present application. The inner wall being integral with the housing not only minimizes the number of separate parts that make up the housing, but also assures that the inner wall is positioned accurately relative to the outer wall. Moreover, even with the inner wall being integral, the various components can still be assembled into the coil assembly (40).

With regard to claim 16, the examiner stated, "Heritier-Best discloses the claimed invention except for the inner wall integrally formed with the housing. It would have been obvious to one having ordinary skill in the art at the time the invention was made to integrally form the inner wall with the housing structure of Heritier-Best, since it has been held that forming in one piece an article which has formerly been formed in two pieces and put together involves only routine skill in the art." Applicant respectfully disagrees.

The magnetic current return circuit members (3 and 4) could not be assembled into the second casing (50) in Heritier-Best if the first casing (40) is formed integrally with the second casing (50) (see Figs. 1-3 of Heritier-Best). Not being able to assemble the return circuit members into the ignition coil (1) would defeat the purpose of the invention of Heritier-Best. Moreover, redesigning the components and assembly of Heritier-Best in an attempt to assemble the ignition coil when the first casing (40) is integrally formed with the second casing (50) would not involve only routine skill in the art. Therefore, claim 1 is not obvious in view of the cited reference.

Claim 16 has been canceled and so the rejection relative to this claim is now moot. Moreover, claims 5-6, 9, 11, and 13-15 all ultimately depend from amended claim 1 and so are not obvious in view of Heritier-Best for at least the same reasons as claim 1. Moreover, each of the dependent claims includes additional limitations that may further distinguish them over the cited reference.

Claims 10 and 12 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Heritier-Best in view of Suzuki et al (U.S. 5,685,065). The rejections are respectfully traversed.

Claims 10 and 12 both ultimately depend from amended claim 1, which, as discussed above, is patentable over Heritier-Best. Suzuki et al. is cited only by the examiner as disclosing a permanent magnet between an inner core and an outer core, and does not provide any teachings that will combine with Heritier-Best to overcome the deficiencies of Heritier-Best as it relates to claim 1. Therefore, claims 10 and 12 are patentable over the cited art for at least the reasons stated relative to claim 1.

Claim 25 has been added. Claim 25 recites in part, "an inner core positioned inside the outer core and including first and second ends, each of the first and second ends positioned proximate the outer core; . . . the housing further having an inner wall extending along the inner periphery of the outer core and positioned between the outer core and the coil assembly, wherein the inner wall extends between the first end of the inner core and the outer core to form a first air gap, and the inner wall also extends between the second end of the inner core and the outer core." New claim 25 is essentially original claim 9 rewritten in independent form.

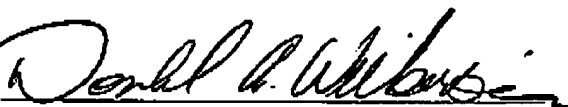
With regard to original claim 9, the examiner stated, "it would have been obvious to one having ordinary skill in the art at the time the invention was made to have the inner wall also extends between the second end of the inner core element and outer core element of Heritier-Best." Applicant respectfully disagrees. As one can see in Figs. 1-3 of Heritier-Best, the first casing (40) (inner wall) only has a bottom that extends between the central magnetic core member (2) (inner core) and the magnetic current return circuit members (3 and 4) (outer core element). The first casing (40) is open on top, so there is no inner wall extending between a second end of the inner core and the outer core. And, if there were, the first casing (40) would be completely enclosed, so the central core (2), spool (10), windings (11 and 21), etc. could not be assembled into the first casing (40). Therefore, claim 25 is not obvious in view of the cited references.

Conclusion:

In summary, the Applicant believes that each formal and substantive requirement has now been met. Applicant respectfully requests the examiner withdraw all of the rejections. The case is now believed to be in appropriate form for allowance, which action is respectfully requested. If a telephone conference would advance the prosecution of this application or resolve any further questions, such a call is invited to Applicants' attorney, whose direct line is (734) 542-0017.

Respectfully submitted,

Date: March 13, 2006

By: 
Donald A. Wilkinson
Attorney for Applicants
Reg. No. 35,410

MacMillan, Sobanski & Todd, LLC
One Maritime Plaza, Fourth Floor
720 Water Street
Toledo, Ohio 43604

8 of 8
10/807,663